

Claims

- [c1] 1. A method for decreasing gradient field pulse sequence duration for a magnetic resonance imaging system, the method comprising:
establishing an allowable gradient field strength for an axis of a plurality of axes for a field of view;
applying a weighting factor associated with each said axis of said plurality of axes;
establishing a slew rate responsive to a selected axis of said plurality of axes that exhibits a largest gradient field strength in light of said weighting factor and said field of view; and
operating said plurality of axes at said largest gradient field strength.
- [c2] 2. The method of Claim 1 wherein said establishing is responsive to an effective gradient coil length.
- [c3] 3. The method of Claim 1 wherein said weighting factor is one of a plurality of weighting factors corresponding to comparative allowable gradient field strengths among said plurality of axes.
- [c4] 4. The method of Claim 1 wherein said plurality of axes

correspond to an X, Y, and Z axes of said magnetic resonance imaging system.

[c5] 5. The method of Claim 1 wherein said operating includes limiting a gradient field strength of only said selected axis of said plurality of axes.

[c6] 6. A method for reducing peripheral nerve stimulation for a magnetic resonance imaging system, the method comprising:
establishing an allowable gradient field strength for an axis of a plurality of axes for a field of view;
applying a weighting factor associated with each said axis of said plurality of axes;
establishing a slew rate responsive to a selected axis of said plurality of axes that exhibits a largest gradient field strength in light of said weighting factor and said field of view; and
operating said plurality of axes at said largest gradient field strength.

[c7] 7. The method of Claim 6 wherein said establishing is responsive to an effective gradient coil length.

[c8] 8. The method of Claim 6 wherein said weighting factor is one of a plurality of weighting factors corresponding to comparative allowable gradient field strengths among

said plurality of axes.

- [c9] 9. The method of Claim 6 wherein said plurality of axes correspond to an X, Y, and Z axes of said magnetic resonance imaging system.
- [c10] 10. The method of Claim 6 wherein said operating includes limiting a gradient field strength of only said selected axis of said plurality of axes.
- [c11] 11. A storage medium encoded with a machine-readable computer program code;
said code including instructions for causing a computer to implement a method for reducing peripheral nerve stimulation for a magnetic resonance imaging system, the method comprising:
establishing an allowable gradient field strength for an axis of a plurality of axes for a field of view;
applying a weighting factor associated with each said axis of said plurality of axes;
establishing a slew rate responsive to a selected axis of said plurality of axes that exhibits a largest gradient field strength in light of said weighting factor and said field of view; and
operating said plurality of axes at said largest gradient field strength.

[c12] 12. A computer data signal comprising code configured to cause a processor to implement a method for reducing peripheral nerve stimulation in a magnetic resonance imaging system, the method comprising:
establishing an allowable gradient field strength for an axis of a plurality of axes for a field of view;
applying a weighting factor associated with each said axis of said plurality of axes;
establishing a slew rate responsive to a selected axis of said plurality of axes that exhibits a largest gradient field strength in light of said weighting factor and said field of view; and
operating said plurality of axes at said largest gradient field strength.

[c13] 13. A system for decreasing gradient field pulse sequence duration and reducing peripheral nerve stimulation with known gradient pulse areas for a magnetic resonance imaging system, the method comprising:
a means for establishing an allowable gradient field strength for an axis of a plurality of axes for a field of view;
a means for applying a weighting factor associated with each said axis of said plurality of axes;
a means for establishing a slew rate responsive to a selected axis of said plurality of axes that exhibits a largest

gradient field strength in light of said weighting factor and said field of view; and
a means for operating said plurality of axes at said largest gradient field strength.